

(19) World Intellectual Property Organization  
International Bureau(43) International Publication Date  
23 March 2006 (23.03.2006)

PCT

(10) International Publication Number  
WO 2006/031034 A1(51) International Patent Classification: H04Q 7/36  
(21) International Application Number: PCT/KR2005/002978(22) International Filing Date:  
9 September 2005 (09.09.2005)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:  
10-2004-0074421 17 September 2004 (17.09.2004) KR  
10-2004-0096104 23 November 2004 (23.11.2004) KR(71) Applicant (for all designated States except US): RADI-  
ANT TECHNOLOGIES, INC. [KR/KR]; 2F., Ilyang  
Bldg., 206, Nonhyun-dong, Kangnam-gu, Seoul 135-010  
(KR).

(72) Inventors; and

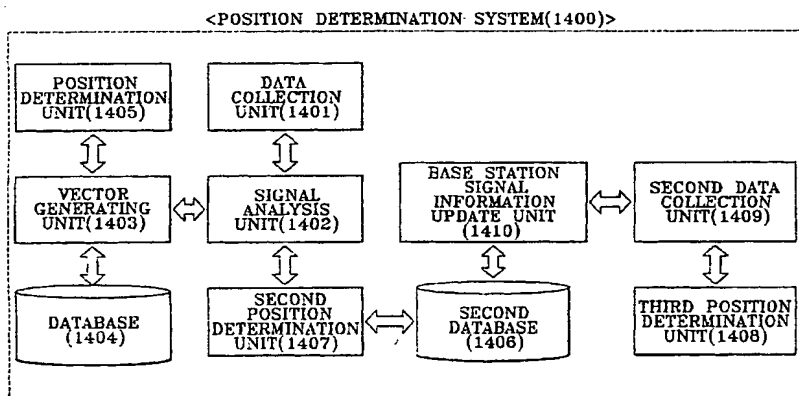
(75) Inventors/Applicants (for US only): KIM, Tae  
II [KR/KR]; No.301, Oak Heights Villa, 610-43,  
Banpo-4-dong, Seocho-gu, Seoul 137-044 (KR). KANG,  
Sung II [KR/KR]; 31/5, 162-13, Sadang-dong, Dong-  
jak-gu, Seoul 156-090 (KR). KWON, Tae Kyoung  
[KR/KR]; 5th Fl., Myung Bldg., 413-2, Dogok-dong,  
Kangnam-gu, Seoul 135-270 (KR). KIM, Sung Hee  
[KR/KR]; No.602-106, Hyundai Apt., Gooeui-3-dong,Kwangjin-gu, Seoul 143-203 (KR). LEE, Won Seok  
[KR/KR]; No.910-616, Joogong Apt., Hagye-dong,  
Noweon-gu, Seoul 139-230 (KR).(74) Agent: KOO, Kee Wan; MUHANN Patent & Law Firm,  
5th Fl., Youngpoong Building, 142 Nonhyun-dong, Kang-  
nam-gu, Seoul 135-749 (KR).(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KM, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM,  
PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM,  
SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN,  
YU, ZA, ZM, ZW.(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT,  
RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA,  
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR DETERMINING POSITION OF MOBILE COMMUNICATION DEVICE



(57) Abstract: Provided is a method and system for determining a position of a mobile communication device in a mobile communication network, the method including the steps of: receiving a plurality of pieces of base station signal information, the base station signal information including base station identification information, the base stations transmitting the base station signal information to the mobile communication device; determining a base station corresponding to each of the plurality of pieces of base station signal information based on the base station identification information; generating vector information associated with the plurality of the base stations based on geographic information corresponding to the determined base station; and generating location information of the device according to the generated vector information, wherein the step of generating the vector information comprises the steps of: determining a predetermined vector proceeding order associated with the plurality of the base stations according to the base station signal information; and sequentially determining a vector with respect to the plurality of the base stations according to the determined vector proceeding order, with the base station in which the device is currently communicating with as a starting point.

WO 2006/031034 A1



*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*